

REMARKS

Claims 1-26 are pending in the application. Claims 1-26 stand rejected. Applicant herein amend claims 1, 7-9, and 22-26. No new matter has been added. Further review is respectfully requested in view of the amendments and following remarks.

I. Telephonic Interview 1/13/2009

Applicants' representative thanks the Examiner for granting an interview conducted *via* telephone on January 13, 2009. In this regard, Applicants' representative appreciates the Examiner's discussion of the claimed subject matter's limitation "**a collection of ranked interpretation representing a list of probable intent**" events or decision point in light of *Calcagno* and *Bolotinikov*, and as applied to the claimed subject matter. Additionally, potential amendments to overcome the current outstanding 35 U.S.C. §101 rejection were also discussed.

II. Rejection of Claims 1-8 and 22-26 Under 35 U.S.C. § 101

Claims 1, 7, and 22-26 have been amended to correct any deficiencies related to the rejection. Claims 2-6, and 8 depend from claim 1, and are believed to be statutory for at least the same reasons. Reconsideration and withdrawal of the outstanding rejection under 35 U.S.C. § 101 is thus respectfully requested.

III. Rejection of Claims 1-6, 9-16, and 19-24 Under 35 U.S.C. § 103

Claims 1-6, 9-16, and 19-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Calcagno et. al.* US 2003/0176,999 ("*Calcagno*") in view of *Newsted et. al.* US 6,016,467 ("*Newsted*"), and in view of *Bolotinikov et. al.* US 2003/0009352 ("*Bolotinikov*"). Withdrawal of this rejection is respectfully requested for at least the following reasons. *Newsted* is not properly combinable to establish a *prima facie* case of obviousness, and *Calcagno* and *Bolotinikov* fail to disclose, teach, or suggest all claimed features.

The subject claims relate to systems for resolving ambiguity in natural language request to determine probable intent. In particular, in response to receiving a natural language request, possible intents may be determined and ranked and an appropriate action performed.

Intent may be determined by removing as much ambiguity as possible by leveraging all the available information received to generate and rank interpretations of a user request. Actions may be generated as a result of the ranked interpretations. To this end, independent claim 1 (and similarly, independent claims 9, and 22), recites:

at least one program module configured to generate from the modified inputs, a collection of ranked interpretations representing a list of probable intent comprising a set of fragments of data types structurally compatible to other fragments in the set, wherein a fragment of the set of compatible fragments is generated by analyzing a grammatical structure of one or more of the modified inputs at a linguistic level , wherein the collection of ranked interpretation is determined based on a number of matching data types.

The Examiner contends that Calcagno teaches the aforementioned claimed feature. However, Applicants' representative respectfully disagree for at least the following reasons.

Calcagno relates to systems and methods for performing semantic analysis that interprets a linguistic structure output by a natural language linguistic analysis system. The semantic analysis system converts the linguistic output by the natural language linguistic analysis system into a data structure model referred to as a Semantic Discourse Representation Structure (SemDRS). However, Calcagno is silent with regards to:

*at least one program module configured to generate from the modified inputs, a collection of **ranked interpretations representing a list of probable intent** comprising a set of fragments of data types **structurally compatible to other fragments in the set**, wherein a fragment of the set of compatible fragments is generated by analyzing a grammatical structure of one or more of the modified inputs at a linguistic level , wherein the collection of ranked interpretation is determined **based on a number of matching data types**.*

In clear contrast, Calcagno's system applies mapping rules which maps from portions of various possible underspecified discourse representation structure (UDRS) to SemDRS fragments to generate SemDRS. When the mapping is complete, the SemDRS fragments are assembled, if possible, according to the box structure of the UDRS. ([0010]). As defined in [0251], "The result of the application of the semantic mapping rules is a set of interpretation fragments that **specify a mapping between** a set of **UDRS** box elements **and** a set of **SemDRS**

box elements.” Evidently, the set of interpretation fragments as disclosed in Calcagno represent merely a set of relationship between UDRS and SemDRS and is not ranked interpretations of *probable intent*. Finally, Calcagno is also silent with regards to combining fragments of similar data type into a set. Accordingly, Calcagno’s cannot be said to teach or suggest the element “*at least one program module configured to generate from the modified inputs, a collection of ranked interpretations representing a list of probable intent comprising a set of fragments of data types structurally compatible to other fragments in the set...*” as recited in claims 1, 9 and 22.

Second, the Examiner asserts that Bolotinikov teaches the “ranking” feature recited in the aforementioned claim. However, Applicants’ representative respectfully disagrees. Claim 1 (and similarly claims 9 and 22), as amended recites: “*wherein the collection of ranked interpretation is determined based on a number of matching data types*.” While Bolotinikov discloses a method of scoring interpretation, the cited references does not adjust the ranking of interpretation based on matching data types. Paragraph [0110]-[0128] list scoring criteria in the Bolotinkov system. Evidently, interpretation score is based on terminology usage and not by the number of matching data type. Thus, Bolotinkov cannot be said to teach or suggest: “*wherein the collection of ranked interpretation is determined based on a number of matching data types*” as recited in claims 1, 9 and 22.

In view of at least the foregoing, Newsted is not properly combinable to establish a *prima facie* case of obviousness, and Calcagno and Bolotinikov fail to disclose, teach, or suggest all claimed features. Accordingly, reconsideration and withdrawal of the outstanding rejection to claims 1, 9 and 22 is respectfully requested. Each of claims 2-8, 10-21, and 23-26 depend directly or in directly from independent claims 1, 9 and 22, respectively, and are believed allowable for the same reasons.

IV. **Rejection of Claims 7-8, 17-18, and 25-26 Under 35 U.S.C. § 103**

Claims 7-8, 17-18, and 25-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Calcagno *et. al.* US 2003/0176,999 (“Calcagno”) in view of Newsted *et. al.* US 6,016,467 (“Newsted”), in view of Faybishenko *et. al.* US 6,961,723 (“Faybishenko”) and in view of Bolotinikov *et. al.* US 2003/0009352 (“Bolotinikov”). Withdrawal of the rejection is requested for at least the following reasons.

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Independent claims 1, 9 and 22 are believed allowable because Calcagno fails to teach or suggest the aforementioned feature. Claims 7-8, 17-18, and 25-26 depend from claims 1, 9 and 22 and are believed allowable for at least the same reasons. Accordingly, reconsideration and withdrawal of the rejection to the subject claims is earnestly solicited.

CONCLUSION

Applicants request the Examiner reconsider the rejections and issue a Notice of Allowance of all the claims.

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